



# itl boulder

THE LIGHT CENTER OF THE INDUSTRY SINCE 1955



NVLAP LAB CODE: 200925-0

INDEPENDENT TESTING LABORATORIES, INC.  
4066 CAMELOT CIRCLE, LONGMONT, CO 80504 USA

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REPORT NUMBER: ITL84576  
ISSUE DATE: 05/04/15  
PREPARED FOR: OXYGEN LIGHTING  
CATALOG NUMBER: 3-689-XX

PAGE: 1 OF 6  
REVISED: 04/04/16

LUMINAIRE: FORMED SEMI-DIFFUSE METAL HOUSING WITH WHITE PAINTED OPTICAL COMPARTMENT, 2 FORMED WHITE PAINTED METAL DRIVER COVERS, 2 WHITE CIRCUIT BOARDS EACH WITH 30 LEDS, TRANSLUCENT WHITE FROSTED ACRYLIC DIFFUSER, FORMED SEMI-DIFFUSE METAL TRIM RING WITH 4 FABRICATED SEMI-DIFFUSE METAL POSTS. DIFFUSER FROSTED SIDE OUT. THE 0-DEGREE PLANE IS PERPENDICULAR TO THE CIRCUIT BOARDS.

LAMPS: SIXTY WHITE LIGHT EMITTING DIODES (LEDS), VERTICAL BASE-UP POSITION.

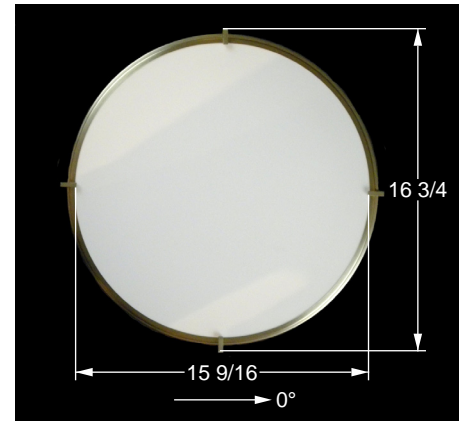
INPUT ELECTRICAL: 120.0 VOLTS, 21.0 WATTS,  
0.179 AMPS

TOTAL REFLECTANCE OF PAINT = 81.3 %  
MOUNTING: SURFACE

LED DRIVERS: TWO ESPEN VEL12030MVH-1

NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED AT RATED INPUT VOLTAGE (120VAC, 60Hz) TO THE DRIVERS. DIFFUSER MATERIAL INFORMATION PROVIDED BY CLIENT.

TEST PROCEDURE: IESNA LM-79-08  
TEST DISTANCE = 20.0 FEET



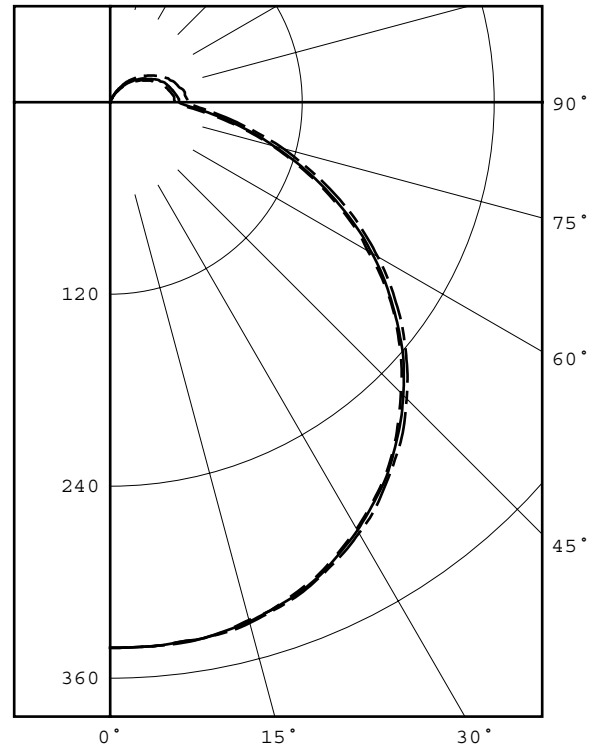
### CANDELA DISTRIBUTION

	0.0	22.5	45.0	67.5	90.0	FLUX
0	341	341	341	341	341	
5	341	341	341	341	341	32
15	335	335	336	336	337	95
25	320	320	321	322	322	148
35	294	293	295	296	297	185
45	257	257	259	261	262	200
55	213	212	214	216	218	192
65	160	159	162	164	167	161
75	105	104	106	109	112	113
85	54	54	57	60	62	64
90	41	41	43	47	49	
95	40	40	42	45	47	46
105	36	36	38	41	43	41
115	30	31	33	35	37	33
125	24	24	26	28	29	23
135	16	17	18	20	21	14
145	9	10	11	12	12	7
155	3	3	4	4	4	2
165	0	0	0	0	0	0
175	0	0	0	0	0	0
180	0	0	0	0	0	0

### FLUX

### ZONAL LUMEN SUMMARY

ZONE	LUMENS	%FIXT
0- 30	276	20.3
0- 40	460	33.9
0- 60	852	62.8
0- 90	1190	87.7
90-120	120	8.9
90-130	144	10.6
90-150	165	12.1
90-180	167	12.3
0-180	1356	100.0



LEGEND:  
0-deg    - - - - -  
45-deg    = = = = =  
90-deg    - - - - -

EFFICACY = 64.6 lm/W  
CIE TYPE - SEMI-DIRECT  
PLANE : 0-DEG 90-DEG  
SPACING CRITERIA : 1.34 1.35

Checked B. HYRE  
Approved R. BEATTIE  
Lighting Engineer



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LUMINANCE DATA IN CANDELA/SQ M			
ANGLE IN DEG	AVERAGE 0-DEG	AVERAGE 45-DEG	AVERAGE 90-DEG
45	2694.	2736.	2747.
55	2561.	2600.	2621.
65	2338.	2401.	2440.
75	2035.	2098.	2171.
85	1642.	1796.	1885.



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CANDELA DISTRIBUTION  
LATERAL ANGLE

	0.0	22.5	45.0	67.5	90.0
0.0	341	341	341	341	341
5.0	341	341	341	341	341
10.0	340	340	340	340	340
15.0	335	335	336	336	337
20.0	329	329	330	331	331
25.0	320	320	321	322	322
30.0	308	308	309	310	311
35.0	294	293	295	296	297
40.0	277	276	278	280	281
45.0	257	257	259	261	262
50.0	236	235	238	239	241
55.0	213	212	214	216	218
60.0	186	186	189	191	193
65.0	160	159	162	164	167
70.0	132	132	134	136	139
75.0	105	104	106	109	112
80.0	78	77	80	83	85
85.0	54	54	57	60	62
90.0	41	41	43	47	49
95.0	40	40	42	45	47
100.0	38	38	40	44	46
105.0	36	36	38	41	43
110.0	33	33	36	39	40
115.0	30	31	33	35	37
120.0	27	27	29	32	33
125.0	24	24	26	28	29
130.0	20	20	22	24	25
135.0	16	17	18	20	21
140.0	13	13	14	16	17
145.0	9	10	11	12	12
150.0	6	6	7	8	8
155.0	3	3	4	4	4
160.0	1	1	1	1	1
165.0	0	0	0	0	0
170.0	0	0	0	0	0
175.0	0	0	0	0	0
180.0	0	0	0	0	0



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5-DEGREE  
ZONAL LUMEN SUMMARY

0- 5	8
5- 10	24
10- 15	40
15- 20	55
20- 25	68
25- 30	80
30- 35	89
35- 40	96
40- 45	99
45- 50	100
50- 55	98
55- 60	93
60- 65	85
65- 70	75
70- 75	63
75- 80	50
80- 85	37
85- 90	27
90- 95	24
95-100	23
100-105	21
105-110	20
110-115	18
115-120	15
120-125	13
125-130	10
130-135	8
135-140	6
140-145	4
145-150	3
150-155	1
155-160	0
160-165	0
165-170	0
170-175	0
175-180	0

10-DEGREE  
ZONAL LUMEN SUMMARY

0- 10	32
0- 20	127
0- 30	276
0- 40	460
0- 50	660
0- 60	852
0- 70	1012
0- 80	1125
0- 90	1190
0-100	1236
0-110	1277
0-120	1310
0-130	1333
0-140	1347
0-150	1354
0-160	1356
0-170	1356
0-180	1356



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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

EFFECTIVE FLOOR CAVITY REFLECTANCE 0.20

RC	80				70				50			30			10			0
	RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
0	116	116	116	116	112	112	112	112	104	104	104	97	97	97	91	91	91	88
1	104	99	94	90	100	95	91	87	89	85	82	83	80	77	77	75	73	70
2	94	85	78	71	90	82	75	70	77	71	66	71	67	63	67	63	60	57
3	85	74	65	58	82	72	64	57	67	60	55	62	57	52	58	54	50	47
4	78	65	56	49	74	63	55	48	59	52	46	55	49	44	52	46	42	39
5	71	58	49	42	68	56	47	41	53	45	39	49	43	38	46	41	36	34
6	66	52	43	36	63	50	42	35	47	40	34	44	38	33	42	36	32	29
7	61	47	38	32	58	45	37	31	43	35	30	40	34	29	38	32	28	26
8	56	43	34	28	54	41	33	28	39	32	27	37	30	26	35	29	25	23
9	53	39	31	25	51	38	30	25	36	29	24	34	28	23	32	26	22	20
10	49	36	28	23	47	35	27	22	33	26	22	31	25	21	30	24	20	18

ALL CANDELA, LUMENS, LUMINANCE, AND VCP VALUES IN THIS REPORT ARE BASED ON ABSOLUTE PHOTOMETRY. THE COEFFICIENT OF UTILIZATION VALUES ARE BASED ON THE TOTAL ABSOLUTE LUMEN OUTPUT OF THIS TEST SAMPLE.



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